

ABSTRACT

One or more embodiments of the instant invention may be briefly summarized as follows. A planarization and smoothing segment includes: (a) a reverse mask and etching method; a sacrificial layer and selective CMP followed by non selective CMP; or a sacrificial layer and selective etching followed by non-selective CMP. A buffer layer to protect wave guide segment includes: (a) waveguide formation followed by buffer layer deposition; or a buffer deposition over the waveguide layer followed by waveguide formation.